What is claimed is:

1. A laser machining apparatus comprising:

a laser beam machine having a machining head for irradiating a laser beam on a workpiece;

a laser oscillator for generating the laser beam;

a controller for controlling said laser beam machine by delivering motion commands to move the machining head relatively to the workpiece at predetermined interpolation periods, and controlling said laser oscillator to output the laser beam in accordance with motion of the machining head of the laser beam machine, said controller including timing data generating means to generate timing data defining time to deliver a laser output control signal to said laser oscillator in terms of a time period from a start of an interpolation period in which the laser output control signal is to be delivered, or in terms of a ratio of dividing said interpolation period; and

a laser output control signal generating means to receive the timing data from said timing data generating means and delay a delivery of the laser output control signal to said laser oscillator by the time period from the start of said interpolation period or by a time period calculated based on the ratio of dividing the interpolation period.

2. A laser machining apparatus according to claim 1, wherein said controller delivers a machining condition designation signal to designate a laser output condition including on/off of the laser output or to select one of laser output conditions stored in said laser output control signal generating means to said laser output control signal generating means, together with the timing data.

3. A laser machining apparatus according to claim 1, wherein the timing data are provided in terms of a ratio between motion amounts of

successive motion commands for the interpolation period in which the motion amounts of the successive motion commands are added together or in terms of a value calculated based on the ratio.

4. A laser machining apparatus according to claim 1, wherein said timing data generating means determines the time period from the start of the interpolation period based on elapsed time from a start of machining and a set time period.

5. A laser machining apparatus according to claim 1, wherein said timing data generating means determines the timing data taking account of one or both of a delay time in a servo feedback system for processing motion commands and a delay time in the laser oscillator.

6. A laser machining apparatus according to claim 1, wherein a predetermined period at which the signal is delivered to the laser output control signal generating means is several times longer than the predetermined interpolation period at which the motion command is delivered.

7. A laser machining apparatus according to claim 1, wherein said timing data generating means delivers the timing data to said laser output control signal generating means at an interpolation period one period prior to the interpolation period in which the laser output control signal is to be delivered.